

BUOYANCY DEVICES USING CONFORMAL CAVITIES

ABSTRACT

CLEAN AMENDED VERSION

The invention provides buoyant structural support exerted by an immersed body wherein the buoyant force is made to exceed the weight of the liquid the body displaces when the liquid is displaced within a cavity that conforms to the horizontal shaping of the body and is only slightly larger in size. The invention calls for cavities that are made to be conformal with preexisting bodies as well as for cavities and bodies made to be conformal in combination. A vertical support column comprises an outer element, closed at the base, with inner walls that are closely spaced from a movable, inner flotation element, accessible from the top, the two being separated in use by a relatively thin layer of liquid that provides a relatively great force of buoyancy. The column is installed before addition of liquid, for convenience in handling, and may be used as an adjustable lift device by incremental additions of liquid.